

LISTING OF CLAIMS:

1. (Original) A Commutator for an electric motor that includes a plurality of power supply brushes, which are slidably engaged with the commutator, the commutator comprising:

a plurality of conductive commutator segments, which are arranged at generally equal angular intervals in a circumferential direction of the commutator, wherein the commutator segments are divided into a plurality of groups, each of which includes two or more of the commutator segments;

a plurality of generally planar short-circuiting parts, which are respectively provided to the groups of the commutator segments and are located radially inward of the commutator segments in such a manner that the short-circuiting parts are spaced one after the other in an axial direction of the commutator, wherein each short-circuiting part is seamlessly and integrally formed with and is electrically connected to at least a portion of each commutator segment of a corresponding one of the groups of the commutator segments, and at least one of the short-circuiting parts is located within an axial extent of at least one of the power supply brushes measured in the axial direction of the commutator; and

a dielectric body, which securely holds each commutator segment and each short-circuiting part.

2. (Original) The commutator according to claim 1, wherein the commutator segments of each group are arranged at generally equal angular intervals in the circumferential direction of the commutator.

3. (Original) The commutator according to claim 1, wherein the short-circuiting parts are displaced from one another by a predetermined angle in the circumferential direction of the commutator.

4. (Original) The commutator according to claim 3, wherein the predetermined angle is defined by the following equation:

$$\text{the predetermined angle} = 360 \text{ degrees} \times 1/\text{the number of commutator segments.}$$

5. (Original) The commutator according to claim 1, wherein:

each commutator segment includes a plurality of sub-elements, which are stacked in the axial direction of the commutator; and

each sub-element is located in a corresponding imaginary plane, which is perpendicular to the axial direction of the commutator, and in which a corresponding one of the short-circuiting parts extends.

6. (Original) The commutator according to claim 5, further includes a plurality of conductive spacer elements, wherein each of the spacer elements is interposed between corresponding two of the sub-elements in the axial direction of the commutator.

7. (Original) The commutator according to claim 5, wherein:

an engaging surface of one of each adjacent two of the sub-elements of each commutator segment has one of an axial recess and an axial projection, wherein the axial projection is press fitted into the axial recess; and

an engaging surface of the other one of the adjacent two of the sub-elements, which is engaged with the engaging surface of the one of the adjacent two of the sub-elements, has the other one of the axial recess and the axial projection.

8. (Original) The commutator according to claim 1, wherein:

each short-circuiting part has an annular small diameter portion and a plurality of connecting portions, wherein the connecting portions extend radially outward from the annular small diameter portion; and

each connecting portion of the short-circuiting part is connected to a corresponding one of the commutator segments of the corresponding one of the groups of the commutator segments.

9. (Original) The commutator according to claim 1, further comprising a plurality of connectors, to which armature winding coils of the motor are connected.

10. (Original) An electric motor comprising:

a stator that includes a plurality of field poles; and

a rotor that is rotatable relative to the field poles and includes a commutator; and

a plurality of power supply brushes, which are slidably engaged with the commutator,

wherein the commutator includes:

a plurality of conductive commutator segments, which are arranged at generally equal angular intervals in a circumferential direction of the commutator, wherein the commutator segments are divided into a plurality of groups, each of which includes two or more of the commutator segments;

a plurality of generally planar short-circuiting parts, which are respectively provided to the groups of the commutator segments and are located radially inward of the commutator segments in such a manner that the short-circuiting parts are spaced one after the other in an axial direction of the commutator, wherein each short-circuiting part is seamlessly and integrally formed with and is electrically connected to at least a portion of each commutator segment of a corresponding one of the groups of the commutator segments, and at least one of the short-circuiting parts is located within an axial extent of at least one of the power supply brushes measured in the axial direction of the commutator; and

a dielectric body, which securely holds each commutator segment and each short-circuiting part.

11-16 (Cancelled)

17. (New) The commutator according to claim 1, wherein each commutator segment includes a plurality of sub-elements, which are stacked continuously one after another in the axial direction of the commutator.

18. (New) The commutator according to claim 17, wherein an axial thickness of each short-circuiting part measured in the axial direction of the commutator is smaller than an axial thickness of each sub-element measured in the axial direction of the commutator.

19. (New) The electric motor according to claim 10, wherein each commutator segment includes a plurality of sub-elements, which are stacked continuously one after another in the axial direction of the commutator.

20. (New) The electric motor according to claim 19, wherein an axial thickness of each short-circuiting part measured in the axial direction of the commutator is smaller than an axial thickness of each sub-element measured in the axial direction of the commutator.